

NEW SPECIES OF *PODABRUS* FROM WESTERN
NORTH AMERICA

(Coleoptera: Cantharidae)

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Since my notes on the species of *Podabrus* of Oregon and Washington were published¹, I have been permitted the privilege of examining certain specimens that were before Fall at the time of his revision of the genus². It has been found that errors in my paper were present, due largely to the lack of type material, and to inadequacies of Dr. Fall's studies. His descriptions were sufficient at the time of his study but are now far outmoded because of the captures of species unknown to him, but closely resembling some of his species.

The specimens before me that were studied by Fall indicated by a black card on the pin, are from the Ralph Hopping collection and were kindly loaned by E. S. Ross and Hugh B. Leech of the California Academy of Sciences.

Indications are that several species of *Podabrus* are much more local in range than they were previously supposed to be. Others have a much greater range than heretofore known. A true understanding of the western representatives of the genus cannot be formed until adequate collections are made from poorly sampled or uncollected areas.

Following my grouping³, *Podabrus edmundsae* should be placed in Group I, *P. piceatus* and *P. ochocensis* in Group II, and *P. alexanderi* in Group III.

***Podabrus edmundsae* Fender, new species**

Shining, black; head rufotestaceous with front narrowly infusate apically, varying to black behind eyes; apical segment of palpi piceous, basal segments darker above; pronotum rufotestaceous with a quadrangular black spot medially on anterior margin, basal margin narrowly black, this black area sometimes extending up the sides, a small, rather obscure spot on inner side of each discal convexity; posterior sternites bordered with rufotestaceous, fifth and sixth with a triangular pale area medially on apical margin, that on sixth being larger, extending nearly to base of segment, seventh and eighth sternites brunneous to rufotestaceous. Pubescence cinereous, thick and depressed. Length 10.5 to 13 mm.

¹ Fender, K. M., 1945, Pan-Pacific Ent., 21 (2): 77-80.

² Fall, H. C., 1928, Entomologica Americana, (n. s.) 8 (2): 65-103.

³ Fender, K. M., 1949, Pan-Pacific Ent., 25 (1): 29-32.

Male: Head slightly wider than pronotum, finely sparsely punctured in front, coarsely punctured between eyes, becoming scabrose punctate on neck; eyes large and prominent; antennae slender, extending to apical third of elytra, third segment slightly longer than second, intermediate segments three and a half times as long as wide. Pronotum transverse, anterior angles rounded, sides arcuate, subparallel to hind angles which are angulately produced, explanate near anterior angles, rather strongly reflexed near hind angles; disc finely sparsely punctulate, a little more coarsely so anterior to convexities which are low and orbicular, median impressed line incomplete, not eroded. Elytra finely rugulose, more coarsely so apically. Body beneath finely, rather closely punctulate, seventh sternite with a large triangular somewhat membranous medial area; protibiae not modified; metacoxae with an apical process which is tipped by a tuft of pale setigerous hairs. All claws with a long acute tooth, causing them to appear broadly cleft.

Female: Similar to male; pronotal markings present but less pronounced, antennae extending to about middle of elytra, intermediate segments about three times as long as wide, fifth and sixth sternites, protibiae and metacoxae not modified.

Holotype, male, Station O, PEAVINE RIDGE, McMinnville, OREGON, June 19, 1948, K. M. Fender; *allotype*, female, McMinnville, Oregon, May 22, 1941; nine *paratypes* from the following Oregon localities, High Heaven, McMinnville; Amity; Marys Peak, Corvallis.

Podabrus edmundsae is very close to *P. conspiratus* Fall, from which it may readily be separated by the pronotal markings, those of *P. conspiratus* being confined to a large quadrangular dark spot medially on the anterior margin.

Fall placed his *P. conspiratus* as near and possibly a mere variety of *Podabrus comes* Leconte. He, however, had only the female from which to diagnose and realizing the weakness of female characters indicated that should the male protibiae be unmodified, *P. conspiratus* should be associated with *P. mexicanus* Gorham and *P. tenuis* Fall. The male of *P. conspiratus*, like that of *P. edmundsae*, does not have the protibiae modified. Both species are quite closely akin to *P. binotatus* Leconte as indicated by their genitalia. Like these two species *P. binotatus* has the pronotum ornamented, but with only a dark spot on each convexity, and the elytra are yellow.

It gives me great pleasure to dedicate this fine species to Dr. J. C. Dirks-Edmunds. Through her interest in ecology and general biology she has not only added new species to be described but is helping to increase the knowledge of species already known.

Podabrus piceatus Fender, new species

Feebly shining to opaque; head black with front flavous to apex which is infusate, palpi flavous with apical segment dark brownish, first two or three antennal segments pale beneath; pronotum rufotestaceous, with or without a median longitudinal black stripe which when present attains and usually expands along apical and basal margins, or these margins alone may be more or less widely black medially; elytra flavous with suture narrowly and apices widely infusate; body beneath black, apices of coxae and femora and bases of trochanters and tibiae pale, more widely so on front legs; male genitalia brownish orange. Pubescence aureous, fine, thick and suberect. Length 7 to 9 mm.

Male: Head wider than pronotum, finely sparsely punctured in front, more closely coarsely so behind the prominent eyes, becoming rugose-punctate on neck; antennae slender, extending to about middle of elytra, segments two to four progressively longer, intermediate segments about three times as long as wide. Pronotum as long as wide, anterior angles obliquely truncated, sides straight, converging slightly to prominent hind angles, basal margin feebly convex in outline, strongly sharply reflexed, sides explanate near anterior angles; discal convexities crescentic and strongly raised, each one half or less as wide as median concavity, median longitudinal impressed line short, extending from near base to middle of concavity, disc finely micro-reticulate, closely and moderately coarsely punctured. Elytra finely rugose-punctured basally, becoming coarsely so apically, costae feebly indicated. Body beneath finely closely punctured, with long, fine transverse rugae on sternites. All claws armed with a stout acute basal tooth.

Female: Similar to male; head as wide as pronotum, eyes smaller and less prominent, antennae extending to basal third of elytra, pronotal convexities less pronounced, median impressed line very short.

Holotype, male, and *allotype*, female, from Station 3, PEAVINE RIDGE, McMinnville, OREGON, June 9, 1948, collected by K. M. Fender; 62 *paratypes* from the following Oregon localities: McMinnville, Peavine Ridge (McMinnville), Baker Creek (McMinnville), Dayton, Dilley, Damascus, Pistol River (coll. Borys Malkin). Collection dates range from May 16 to June 10.

Podabrus piceatus is close to *Podabrus extricatus* Fall which is smaller (6 to 7 mm.), has the pronotum flavous with a narrow median dark stripe, more shining, less closely punctured, and the convexities nearly as wide as the median concavity and thus less sharply rounded; the pubescence of *P. extricatus* is coarser, longer and sparser. *Podabrus extricatus* was incorrectly cited from Oregon by me⁴, the proper species being *P. piceatus*. *P. extricatus* is not now known to occur outside California.

⁴ Fender, K. M., 1945, Pan-Pacific Ent., 21: 79.

A series of eight specimens of *Podabrus* was collected by Borys Malkin along the Pistol River, Curry County, Oregon. They are black with small red spots at the anterior angles of the pronotum; the bases of the antennae and sides of the head beneath the antennae are pale. Another series, without the red pronotal spots except in an occasional female, has been collected at Crater Lake, Wallowa Lake, Bear Springs (Wapinitia Hgwy.), Mottet Ranger Station (Blue Mts.) and Takakkaw Falls, Oregon, and Yoho National Park, British Columbia (C. P. Alexander). No external character has been found to separate this latter series from *Podabrus piniphilus* Eschscholtz. By the conformation of the male genitalia, both the above series show a much closer affinity with *P. piceatus* (fig. 1) and *P. extricatus* than with *P. piniphilus* (fig. 2). They may prove to be but extremes of a variable species. Cleared genitalia may be required to verify the relationship.

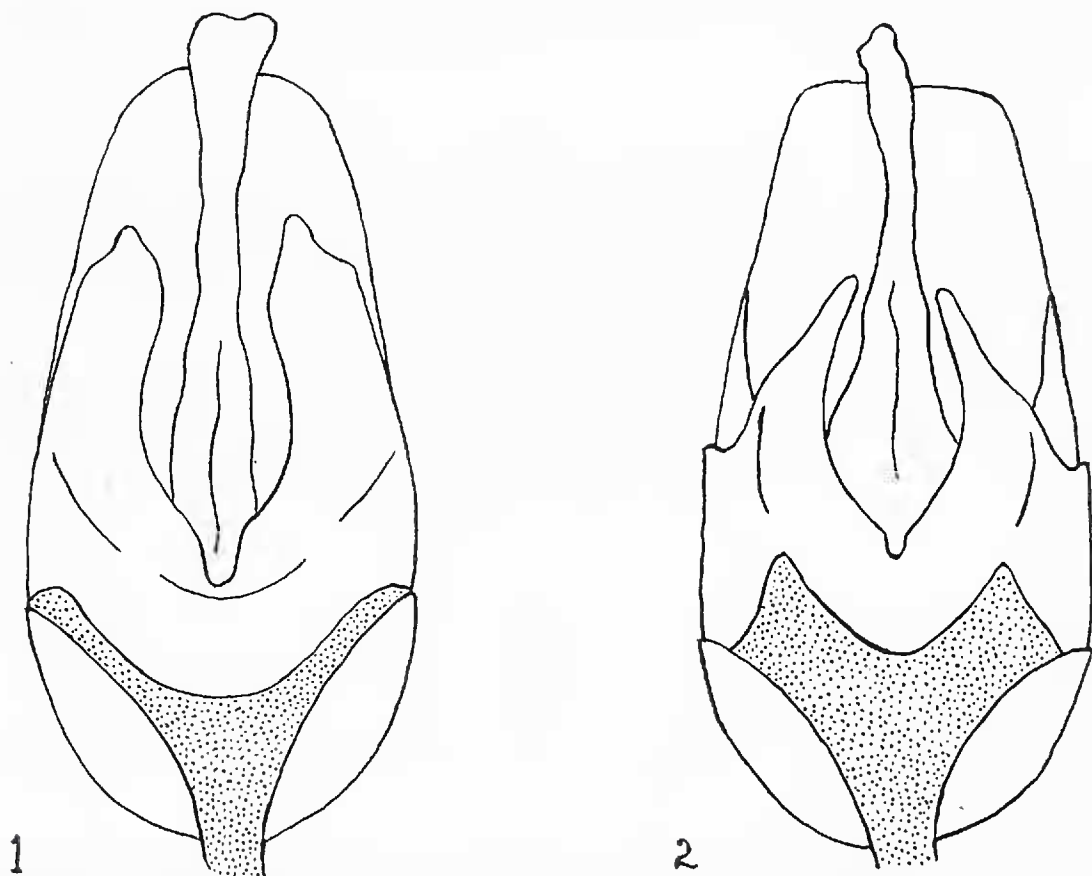


Fig. 1. *Podabrus piceatus* n. sp., male genital armature, ventral view.
Fig. 2. *Podabrus piniphilus* Eschscholtz, male genital armature, ventral view.

Podabrus ochocensis Fender, new species

Opaque, black; head in front of eyes pale, varying to sides of front pale; basal two or three antennal segments pale beneath; explanate sides of pronotum flavous, pale areas sometimes connected near anterior margins; anterior tibiae and tarsi sometimes brunneous; apical margins of abdominal sternites narrowly pale. Pubescence cinereous, fine, thick and depressed to suberect. Length 6 to 7.5 mm.

Male: Head wider than pronotum, coarsely closely punctured behind antennae, more closely so on neck, finely sparsely punctured in front; eyes large and prominent; antennae slender, extending to the middle of elytra, second segment about two-thirds length of third, third evidently shorter than fourth, intermediate segments about three times as long as wide. Pronotum one-eighth wider than long, anterior angles oblique, sides parallel to middle, concavely narrowing to hind angles which are acute, sides rather widely explanate, becoming strongly reflexed at hind angles; disc coarsely closely punctured, becoming less coarsely so on explanate sides, median concavity deep and so closely punctured that punctures are difficult to distinguish, similarly punctured on the anterior third; a longitudinal impressed line is obliterated except for a short distance between convexities. Elytra finely rugose-punctate, with two faint discal costae. Body beneath finely rather closely punctured, pubescence short and depressed; all claws armed with a stout basal tooth, those on the middle and hind legs short but less than right angles; those on front legs more acute, free angle extending nearly as far as the claw proper.

Female: Similar to male; head slightly narrower than pronotum, eyes smaller and less prominent; antennae extending to basal fourth of elytra, intermediate segments about two and a half times as long as wide. Pronotum less strongly explanate at sides, sides feebly sinuate, narrowing slightly from oblique anterior angles to hind angles which are feebly prominent.

Holotype, male, *allotype*, female, and nine *paratypes*, from OCHOCO CREEK, OCHOCO NATIONAL FOREST, OREGON, June 14, 1941, collected by D. McKey-Fender and K. M. Fender.

This species runs to *Podabrus scaber* Leconte in Fall's key. It fits still more closely Fall's description of *P. scaber*, his key being in error where he states the pronotum is black with a lateral red spot. Actually the species has the thorax black with the sides quite widely reddish yellow. In *P. scaber* the pronotal convexities are low and flattened on top, the median concavity is shallow, this disc is quite evenly coarsely punctured, the elytra being strongly coarsely rugose-punctate.

Podabrus alexanderi Fender, new species

Feebly shining, black; sides of the front, mandibles, all but apical segments of palpi and basal two or three antennal segments beneath, rufotestaceous; in males, front more or less widely brownish along margin, and a feeble pale spot at sides and near anterior angles of pronotum; apical segments of palpi brownish; apices of all coxae and femora narrowly pale, a little more widely so on coxae. Pubescence cinereous, short, suberect and inconspicuous. Length 8.5 to 9 mm.

Male: Head slightly wider than pronotum, opaque, closely rather coarsely punctured behind antennae, front shining and finely sparsely punctate; eyes prominent and rather coarsely faceted; antennae slender extending to middle of elytra, third segment twice as long as second, intermediate segments about three times as long as wide. Pronotum small, transverse, about one-fourth wider than long, anterior angles obliquely truncated, sides straight, converging slightly to hind angles which are acute; disc opaque, finely rather sparsely punctured, becoming rugulose on anterior third, convexities widely separated, median longitudinal line slightly raised or absent, a deep submarginal sulcus present along basal margin. Elytra closely rugose-punctate, discal costae feeble. Body beneath finely punctured, a little more closely so on abdomen. All claws finely cleft.

Female: Similar to male; front pale on each side beneath antennae; head slightly narrower than pronotum, eyes smaller and less prominent, antennae extending to basal third of elytra, intermediate segments about two and a half times as long as wide. Pronotum transverse, sides parallel from obliquely truncated anterior angles to prominent basal angles. All claws toothed at base.

Holotype, male, *allotype*, female, and eleven *paratypes*, from SUNWAPTA PASS, BANFF NATIONAL PARK, ALBERTA, July 21–26, 1949, collected by C. P. Alexander.

This species is related to *Podabrus fissilis* Fall. In that species, the head in front of the antennae is rufotestaceous, the pronotum of the male is nearly as long as wide and the sides are sinuate. The male genitalia are decidedly different; in *P. fissilis* the apical margin of the dorsal plate of the tegmen is very shallowly, widely emarginate, while in *P. alexanderi* it is deeply, less widely so.

It is a great pleasure to dedicate this species to Dr. C. P. Alexander, in gratitude for his interest in my studies as well as for his many fine additions to my collection.